

Claims

[c1] We claim:

1. A method for obtaining data stored in a non-volatile memory and data stored in volatile memory in a facility monitoring system, comprising:
retrieving a first data set stored in the non-volatile memory associated with a first computer wherein the first data set includes data collected from at least one sensor over a first predetermined time interval;
retrieving a second data set stored in the volatile memory associated with a second computer wherein the second data set comprises data collected from the at least one sensor over a second time interval after the first time interval; and,
storing at least a portion of the first data set and the second data set in a first memory.

[c2] 2. The method of claim 1 wherein the first data set corresponds to values obtained from a plurality of sensor signals measuring operating parameters associated with a plurality of devices in a plant or processing facility.

[c3] 3. The method of claim 1 further comprising sending a first data request message from a third computer to the

first computer requesting information corresponding to the first and second data sets.

- [c4] 4. The method of claim 3 further comprising sending a second data request message from the first computer to the second computer requesting information corresponding to the second data set, in response to the first computer receiving the first data request message.
- [c5] 5. The method of claim 4 further comprising sending the first data set from the second computer to the first computer in response to the second computer receiving the second data request message.
- [c6] 6. The method of claim 5 further comprising sending the first data set and the second data set from the first computer to the third computer.
- [c7] 7. The method of claim 1 wherein the non-volatile memory comprises a hard drive and the volatile memory comprises random-access memory.
- [c8] 8. The method of claim 1 further comprising generating a graphical plot of at least a portion of the first data set and the second data set on a computer monitor.
- [c9] 9. The method of claim 1 further comprising generating a data report based on at least a portion of the first data

set and the second data set.

- [c10] 10. The method of claim 1 further comprising exporting at least a portion of the first data set and the second data set to a first software application.
- [c11] 11. A method for obtaining and displaying data stored in a non-volatile memory and data stored in volatile memory in a facility monitoring system, comprising:
 - retrieving a first data set stored in the non-volatile memory associated with a first computer wherein the first data set includes data collected from at least one sensor over a first predetermined time interval;
 - retrieving a second data set stored in the volatile memory associated with a second computer wherein the second data set comprises data collected from the at least one sensor over a second time interval after the first time interval; and,
 - concurrently displaying at least a portion of the first data set and the second data set on a computer monitor.
- [c12] 12. A facility monitoring system for obtaining data stored in a non-volatile memory and data stored in a volatile memory, comprising:
 - a first computer operatively associated with the non-volatile memory storing a first data set, the first data set having data collected from at least one sensor over a

first time interval; a second computer having the volatile memory storing a second data set having data collected from the at least one sensor over a second time interval after the first time interval; and, a third computer configured to receive the first and second data sets from at least one of the first and second computers and to store at least a portion of the first and second data sets in a first memory.

- [c13] 13. The system of claim 12 wherein the first data set corresponds to values obtained from a plurality of sensor signals measuring operating parameters associated with a plurality of devices.
- [c14] 14. The system of claim 12 wherein the third computer is further configured to send a first data request message to the first computer requesting information corresponding to the first and second data sets.
- [c15] 15. The system of claim 14 wherein the first computer is further configured to send a second data request message to the second computer requesting information corresponding to the second data set, in response to the first data request message.
- [c16] 16. The system of claim 15 wherein the second com-

puter is further configured to send the first data set to the first computer in response to the second data request message.

- [c17] 17. The system of claim 16 wherein the first computer is further configured to send the first data set and the second data set to the third computer.
- [c18] 18. The system of claim 12 wherein the non-volatile memory comprises a hard drive and the volatile memory comprises a random-access memory.
- [c19] 19. The system of claim 12 wherein the third computer is further configured to generate a graphical plot of at least a portion of the first data set and the second data set on the computer monitor.
- [c20] 20. A facility monitoring system for obtaining and displaying data stored in a non-volatile memory and data stored in a volatile memory, comprising:
 - a first computer operatively associated with the non-volatile memory storing a first data set, the first data set having data collected from at least one sensor over a first time interval;
 - a second computer having the volatile memory storing a second data set having data collected from the at least

one sensor over a second time interval after the first time interval; and,
a third computer configured to receive the first and second data sets from at least one of the first and second computers and to concurrently display at least a portion of the first and second data sets.

- [c21] 21. A facility monitoring system for obtaining data stored in a non-volatile memory and data stored in a volatile memory, comprising:
a first computer means operatively associated with the non-volatile memory for storing a first data set, the first data set having data collected from at least one sensor over a first time interval;
a second computer means having the volatile memory for storing a second data set having data collected from the at least one sensor over a second time interval after the first time interval; and,
a third computer means for receiving the first and second data sets from at least one of the first and second computers and storing at least a portion of the first and second data sets in a first memory.
- [c22] 22. An article of manufacture, comprising:
a computer storage medium having a computer program encoded therein for obtaining data stored in a non-volatile memory and data stored in volatile memory in a

facility monitoring system, the computer storage medium including:
code for retrieving a first data set stored in the non-volatile memory associated with a first computer wherein the first data set includes data collected from at least one sensor over a first predetermined time interval;
code for retrieving a second data set stored in the volatile memory associated with a second computer wherein the second data set comprises data collected from the at least one sensor over a second time interval after the first time interval; and,
code for storing at least a portion of the first data set and the second data set in a first memory.

- [c23] 23. A facility monitoring system, comprising:
a computer including a non-volatile memory and a volatile memory, the computer configured to store a first data set in the non-volatile memory, the first data set having data collected from at least one sensor over a first time interval, the computer further configured to store in the volatile memory a second data set having data collected from the at least one sensor over a second time interval after the first time interval, the computer further configured to retrieve the first data set from the non-volatile memory and the second data set from the volatile memory and to store the first and second data

sets in either the volatile memory or a first memory.